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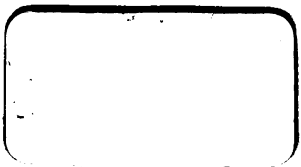


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PATTERN BOOK.

PATTERN BOOK.

LIST
OF
PATTERNS, ETC.

BELONGING TO THE
SOUTH BOSTON IRON COMPANY;

CYRUS ALGER AND OTHERS,
PROPRIETORS.

REVISED AND CORRECTED, WITH ADDITIONS MADE, TO MAY 1, 1851.

Foundry and Machine Shop — South Boston.
Office — Head of Central Wharf.

J **BOSTON:**

PRINTED BY JOHN WILSON & SON,
22, SCHOOL STREET.
1851.

Eng 1838.51

1857. June. 29.

Gift of

Henry G. Denny Esq.
of Boston.

SOUTH BOSTON IRON COMPANY.

THE SOUTH BOSTON IRON COMPANY are prepared to execute orders for CASTINGS of every description, at the shortest notice, and on the most favorable terms.

In addition to the Geer-wheels, &c. which are particularly enumerated in the following pages, they are constantly adding new patterns to the list, and have first-rate pattern-makers in their employ, so that those who are unable to accommodate themselves from such as are already on hand can be suited with new ones, made at short notice, and of such form and dimensions as may be required. They have also a great variety of Gudgeon, Shaft, Pedestal, Box, and other Patterns used in the various kinds of ma-

chinery; and Hanger Patterns from $8\frac{1}{2}$ to 18 inches, suitable for shafts from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches.

They have also a *Machine Shop* attached to the Foundry, where all kinds of Boring and Turning, including Wrought Iron and Blacksmith Work, are executed in the best manner.

ROLLING-MILL CASTINGS.

All descriptions of castings for Rolling-mills are furnished to order.

Chilled Rollers, of any dimensions desired, are made to order and warranted. From long experience in this branch of business (Mr. Alger having originally invented and patented the present mode of casting them), they feel confident of being able to furnish a first-rate article.

COMPOSITION CASTINGS AND BRONZE CANNON.

These will be furnished at short notice, and of the best quality. These Guns intended for Merchantmen or Steamers to give notice of arrival or departure, as well as for defence, if

occasion should require, are of various calibers, usually 4, 6 and 9'pounders. They are attached to carriages, and are furnished with percussion locks.

A constant supply of the following articles, among many others, kept on hand : —

Potash Kettles	Cespools
Cauldrons, 15 to 75 galls.	Travellers
Bark Mills	Grind-stone Cranks
Corn Crackers	Friction Rollers for do.
Door Scrapers	Hoisting Wheels and Pin-
Hawser Pipes	ions
Chain Deck Pipes	Lathe Wheels
Stove Deck Pipes	Lathe Poppets
Tire Benders	Rests and T's for do.
Forge Backs	Windlass Boxes
Oven Doors	Truck Wheels
Ash Doors	Furnaces for Heating
Boiler Doors	Houses
Do. Grates	Dumb Bells
Grate Bars, 12 to 36 inches	Wing Gudgeons
Cylinder Stoves	Saw Mill Cranks
Frames and Grates	Fulling Mill do.
Basket Grates	Rollers for Doors

Barrow's celebrated Cooking Ranges, three sizes, constantly on hand.


SUGAR MILLS.

Sugar Mills, both *horizontal* for *steam power*, and *perpendicular* for *cattle power*, made at short notice, and usually on hand.

LOAM CASTINGS.

Large Kettles from 100 to 1,500 gallons, and of any form required, made at short notice. Also *Curbs* for the same, for the use of *Soap-boilers* and others. *Sugar Pans* and *Oil Kettles* of all sizes. *Cylinders* for *Paper Manufacturers*, *Powder Works* or any other purpose, of any size that may be wanted, from one foot or less to fifteen feet in diameter. An assortment of *Soap Kettles*, &c. usually kept on hand.

Heavy Loam and *Dry Sand* Castings, made of gun iron, are warranted to be from 50 to 100 per cent stronger than if made of common foundry iron.

 **ORDERS** for *Locomotive Cranks*, *Car Axles*, and all descriptions of *Shafting* of forged iron, executed with despatch.

SPUR WHEELS.

9

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
215	1	7	$3\frac{1}{2}$	17	5	
216	<i>6-6</i> 2	$3\frac{1}{4}$	<i>3\frac{1}{4}</i> $3\frac{1}{4}$	<i>76</i> 26	<i>9</i> $4\frac{3}{8}$	
482	1	$7\frac{3}{4}$	$3\frac{1}{4}$	19	9	
483	21	$7\frac{1}{2}$	$3\frac{1}{4}$	256	9	16 segmt.
484	10		$3\frac{1}{4}$	117	9	
485	2	$10\frac{3}{4}$	$3\frac{1}{4}$	35	9	
217	2	$3\frac{1}{4}$	$3\frac{1}{8}$	27	$4\frac{1}{2}$	
218	1	$10\frac{3}{8}$	$3\frac{1}{8}$	22	$3\frac{5}{8}$	
223	2		$3\frac{1}{8}$	24	$7\frac{1}{2}$	
224		$10\frac{1}{2}$	$3\frac{1}{8}$	11	$7\frac{1}{2}$	
219	4	$2\frac{1}{4}$	3	53	$5\frac{1}{2}$	
220	3	1	3	39	$5\frac{1}{2}$	
221	2	$9\frac{1}{4}$	3	35	$5\frac{1}{2}$	
222	2	$1\frac{5}{8}$	3	27	$5\frac{1}{2}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
193	1	10 $\frac{3}{4}$	3	24	6 $\frac{1}{2}$	
442	2	4	3	29	5 $\frac{1}{2}$	
1	20		2 $\frac{7}{8}$	220	7	24 segmt.
2	5	11 $\frac{5}{8}$	2 $\frac{7}{8}$	78	7	
3	2	11 $\frac{1}{2}$	2 $\frac{7}{8}$	39	7	
4	2	4 $\frac{3}{8}$	2 $\frac{7}{8}$	31	7	
5	20		2 $\frac{7}{8}$	220	6	24 segmt.
6	4	1 $\frac{3}{4}$	2 $\frac{7}{8}$	54	5	mortice.
0	2		2 $\frac{7}{8}$	26	5	
27	24	4 $\frac{1}{2}$	2 $\frac{7}{8}$	323	7	{ 11 of 14 cogs.
486	1	6 $\frac{3}{8}$	2 $\frac{7}{8}$	20	7	{ 13 of 13 do.

SPUR WHEELS.

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No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
7	6	$6\frac{3}{4}$	$2\frac{1}{8}$	88	$6\frac{3}{8}$	
8	3		$2\frac{1}{8}$	40	$6\frac{3}{8}$	
9	2	$\frac{1}{4}$	$2\frac{1}{8}$	27	$6\frac{1}{2}$	
10	1	$6\frac{7}{8}$	$2\frac{1}{8}$	21	$6\frac{3}{8}$	
11	1	$5\frac{3}{16}$	$2\frac{1}{8}$	19	$6\frac{3}{8}$	
12	10	8	$2\frac{1}{8}$	144	6	16 segmt.
13	6	$6\frac{5}{8}$	$2\frac{1}{8}$	88	5	mortice.
453	10		$2\frac{1}{16}$	137	$6\frac{1}{2}$	{ 5 segmt. 12 cogs. 7 do. 11 do.
15	1	8	$2\frac{3}{4}$	23	$4\frac{1}{4}$	
16	9	8	$2\frac{3}{4}$	132	8	12 segmt.
17	4	$7\frac{3}{4}$	$2\frac{3}{4}$	64	8	
18	12		$2\frac{3}{4}$	165	$7\frac{1}{2}$	15 segmt.
19	5		$2\frac{3}{4}$	68	$7\frac{3}{8}$	
20	4	$\frac{1}{2}$	$2\frac{3}{4}$	55	7	
21	1	$11\frac{3}{4}$	$2\frac{3}{4}$	27	$7\frac{3}{8}$	
22	1	$9\frac{1}{4}$	$2\frac{3}{4}$	24	6	
23	3		$2\frac{3}{4}$	41	$7\frac{3}{8}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
24	3	9 $\frac{1}{2}$	2 $\frac{3}{4}$	52	4 $\frac{3}{4}$
25	1	$\frac{1}{2}$	2 $\frac{3}{4}$	14	4 $\frac{3}{4}$
73	1	10	2 $\frac{3}{4}$	25	6
74	19		2 $\frac{3}{4}$	360	8 20 segmt.
75	2		2 $\frac{3}{4}$	27	8
487	1	$\frac{1}{2}$	2 $\frac{3}{4}$	14	8 $\frac{1}{2}$
26	2		2 $\frac{11}{16}$	28	5
71	2		2 $\frac{11}{16}$	28	7
60	2	7 $\frac{3}{8}$	2 $\frac{5}{8}$	38	3 $\frac{1}{2}$
61		10 $\frac{7}{8}$	2 $\frac{5}{8}$	13	3 $\frac{1}{2}$
62	1	9 $\frac{1}{2}$	2 $\frac{5}{8}$	26	3 $\frac{1}{2}$
63	1	8	2 $\frac{5}{8}$	24	5

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
64	1	8	$2\frac{5}{8}$	24	5	
65	13	$10\frac{1}{2}$	$2\frac{5}{8}$	201	7	$\left\{ \begin{array}{l} 9 \text{ segmt. 13 cogs.} \\ 7 \text{ do. 12 do.} \end{array} \right.$
67	10		$2\frac{5}{8}$	144	7	8 segmt.
76	2	4	$2\frac{5}{8}$	34	7	
437	1	$10\frac{1}{2}$	$2\frac{5}{8}$	27	11	
436	14	2	$2\frac{5}{8}$	208	11	16 segmt.
446	18	$5\frac{1}{2}$	$2\frac{5}{8}$	264	7	24 segmt.
28	13		$2\frac{9}{16}$	192	7	16 segmt.
29	1	$8\frac{5}{8}$	$2\frac{9}{16}$	25	7	
53	5	$8\frac{3}{4}$	$2\frac{9}{16}$	84	5	—
54	4	$\frac{1}{2}$	$2\frac{9}{16}$	60	4	
55	2		$2\frac{9}{16}$	30	4	
56	1	$1\frac{1}{2}$	$2\frac{9}{16}$	17	$4\frac{3}{4}$	
57		$8\frac{3}{8}$	$2\frac{9}{16}$	10	4	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
59	2	5 $\frac{1}{2}$	2 $\frac{9}{16}$	36	4	
78	1	8 $\frac{1}{2}$	2 $\frac{9}{16}$	25	7	
448	20		2 $\frac{9}{16}$	300	7	20 segmt.
30	18	1 $\frac{3}{4}$	2 $\frac{1}{2}$	272	5 $\frac{1}{2}$	16 segmt.
31	2	$\frac{1}{4}$	2 $\frac{1}{2}$	30	5 $\frac{1}{2}$	
32	4	4	2 $\frac{1}{2}$	66	4 $\frac{3}{4}$	
33	2	11 $\frac{1}{4}$	2 $\frac{1}{2}$	44	4 $\frac{3}{4}$	
34	18	1	2 $\frac{1}{2}$	272	7	16 segmt.
35	2	10	2 $\frac{1}{2}$	42	7	
36	1	$\frac{3}{4}$	2 $\frac{1}{2}$	16	5 $\frac{1}{4}$	
37	16	2	2 $\frac{1}{2}$	242	4 $\frac{1}{8}$	22 segmt.
38	3	5 $\frac{1}{4}$	2 $\frac{1}{2}$	53	5 $\frac{3}{4}$	
39	1	7 $\frac{5}{8}$	2 $\frac{1}{2}$	24	3 $\frac{7}{8}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
40	2	2½	2½	33	5½	} pinions for mortice wheels. mortice.
41	1	4	2½	20	5½	
42	1	1¾	2½	17	5	
43	4	5	2½	66	5	
44	17	2	2½	256	7¼	16 segmt.
45	2	10¾	2½	43	7¼	
46	15	10½	2½	240	7	16 segmt.
47	2	¼	2½	30	7	
48	11	6	2½	176	5	16 segmt.
49	1	7	2½	24	5	
50	21		2½	312	8½	24 segmt.
51	2	¾	2½	31	8½	
52	4	6½	2½	68	6	
395	3	2	2½	48	6½	
396	1		2½	15	7	
397		11	2½	14	7½	
398	1	2¼	2½	18	8	
399	10		2½	152	5½	8 segmt.
400	7	—	2½	108	6	
58	4	11	2½	76	4¾	{ 4 segmt. 13 cogs. 2 do. 12 do.
66	21	7	2½	320	7	16 segmt.
68	18		2½	272	6	16 segmt.
70	9	2	2½	140	5	{ 8 segmt. 12 cogs. 4 do. 11 do.
69	18		2½	272	7	16 segmt.
72	2		2½	30	7	
77	1	8	2½	25	7	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
79	3	10	$2\frac{1}{2}$	58	6	
488	2	$4\frac{1}{2}$	$2\frac{1}{2}$	36	6	
489	1	$\frac{1}{4}$	$2\frac{1}{2}$	15	4	
490	1	$11\frac{1}{4}$	$2\frac{1}{2}$	29	$5\frac{1}{2}$	
	<i>1-2$\frac{1}{4}$</i>		<i>2$\frac{1}{2}$</i>	<i>18</i>	<i>6$\frac{1}{2}$</i>	
80	3	11	$2\frac{7}{16}$	60	$6\frac{3}{4}$	
81	18	$11\frac{1}{2}$	$2\frac{7}{16}$	280	4	20 segmt.
447	14	$6\frac{1}{2}$	$2\frac{7}{16}$	224	$5\frac{1}{2}$	16 segmt.

SPUR WHEELS.

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No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
87	17		$7\frac{7}{16}$	264	$5\frac{1}{2}$	24 segmt.
424	1	8	$2\frac{7}{16}$	26	6	
	$1-3\frac{3}{4}$		$2\frac{3}{4}$	30	$5\frac{1}{2}$	
90	15		$2\frac{3}{8}$	240	6	16 segmt.
91	2	$11\frac{1}{4}$	$2\frac{3}{8}$	47	6	
92	1		$2\frac{3}{8}$	16	6	
93	2	$11\frac{3}{4}$	$2\frac{3}{8}$	46	$5\frac{1}{8}$	
94	14		$2\frac{3}{8}$	224	5	16 segmt.
95	11	6	$2\frac{3}{8}$	192	4	12 segmt.
96	2	$1\frac{3}{8}$	$2\frac{3}{8}$	33	$5\frac{7}{8}$	
97			$2\frac{3}{8}$		6	
98	1	$11\frac{1}{4}$	$2\frac{3}{8}$	30	5	
99	4	$1\frac{1}{2}$	$2\frac{3}{8}$	66	6	
100	1	$4\frac{1}{2}$	$2\frac{3}{8}$	22	6	
101	12	$1\frac{1}{2}$	$2\frac{3}{8}$	192	$5\frac{1}{4}$	
102	1	$6\frac{3}{8}$	$2\frac{3}{8}$	24	$5\frac{1}{2}$	
103	2		$2\frac{3}{8}$	32	$5\frac{1}{2}$	
104	15	$10\frac{1}{2}$	$2\frac{3}{8}$	156	4	16 segmt.
105	1	$4\frac{1}{2}$	$2\frac{3}{8}$	22	4	
106	8	$1\frac{1}{2}$	$2\frac{3}{8}$	130	$5\frac{1}{2}$	10 segmt.
420	1	$7\frac{1}{2}$	$2\frac{3}{8}$	26	6	
421	24	$1\frac{1}{2}$	$2\frac{3}{8}$	384	7	24 segmt.
422	1	$4\frac{3}{4}$	$2\frac{3}{8}$	22	7	

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
418	5	7 $\frac{1}{4}$	2 $\frac{3}{8}$	86	5	{ 6 segmt. 11 cogs. 2 do. 10 do.
419	23	10	2 $\frac{3}{8}$	382	5 $\frac{1}{2}$	{ 30 segmt. 12 cogs. 2 do. 11 do.
89	17		2 $\frac{3}{8}$	272	6 $\frac{1}{2}$	16 segmt.
88	9	9	2 $\frac{3}{8}$	156	5 $\frac{1}{2}$	12 segmt.
86	20		2 $\frac{3}{8}$	321	5 $\frac{1}{2}$	{ 9 segmt. 14 cogs. 15 do. 13 do.
85	13	2	2 $\frac{3}{8}$	216	6	{ 16 segmt. 11 cogs. 4 do. 10 do.
84	5	4 $\frac{1}{2}$	2 $\frac{3}{8}$	86	6	{ 7 segmt. 11 cogs. 1 do. 9 do.
83	2	$\frac{1}{4}$	2 $\frac{3}{8}$	32	6 $\frac{1}{2}$	
430	15		2 $\frac{3}{8}$	262	5	{ 6 segmt. 17 cogs. 10 do. 16 do.
429	9	7 $\frac{1}{2}$	2 $\frac{3}{8}$	156	6	12 segmt.
428	1	7 $\frac{1}{2}$	2 $\frac{3}{8}$	26	6	
82	1	4 $\frac{3}{4}$	2 $\frac{3}{8}$	22	7	
449	24		2 $\frac{3}{8}$	384	7	24 segmt.
501	12	3	2 $\frac{3}{8}$	196	6 $\frac{1}{2}$	{ 4 segmt. 17 cogs. 8 do. 16 do.
	2-4 $\frac{1}{8}$		2 $\frac{3}{8}$	37	6 $\frac{1}{2}$	

SPUR WHEELS.

19

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
107	11	7	$2\frac{5}{16}$	192	$6\frac{1}{2}$	16 segmt.
108	1	$6\frac{1}{4}$	$2\frac{5}{16}$	25	$6\frac{1}{2}$	
110	16	$1\frac{1}{2}$	$2\frac{5}{16}$	264	5	24 segmt.
111	1	6	$2\frac{5}{16}$	24	5	
112	1		$2\frac{5}{16}$	16	5	
113		$8\frac{7}{8}$	$2\frac{5}{16}$	12	5	
114	11	$10\frac{5}{8}$	$2\frac{5}{16}$	194	5	{ 10 segmt. 16 cogs. 2 do. 17 do.

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
124	1	10 $\frac{3}{4}$	2 $\frac{1}{4}$	32	5 $\frac{1}{2}$	
125	15	10 $\frac{3}{4}$	2 $\frac{1}{4}$	270	5 $\frac{1}{2}$	18 segmt.
126	2	4 $\frac{1}{2}$	2 $\frac{1}{4}$	39	5	
128	13	9	2 $\frac{1}{4}$	228	4 $\frac{1}{2}$	19 segmt.
129	1	8 $\frac{1}{2}$	2 $\frac{1}{4}$	28	5	
130	8	6	2 $\frac{1}{4}$	144	4 $\frac{7}{8}$	12 segmt.
131	3	1	2 $\frac{1}{4}$	53	4	
132	1	11 $\frac{1}{2}$	2 $\frac{1}{4}$	33	4	
133	1	8 $\frac{3}{8}$	2 $\frac{1}{4}$	17	12	} pinions for rolling mills.
134		11 $\frac{1}{2}$	2 $\frac{1}{4}$	16	12	
135	28		2 $\frac{1}{4}$	432	7	24 segmt.
136	17		2 $\frac{1}{4}$	288	7	16 segmt.
137	20		2 $\frac{1}{4}$	336	7	24 segmt.
138	7	10 $\frac{1}{2}$	2 $\frac{1}{4}$	132	5 $\frac{1}{2}$	11 segmt.
139	3	4 $\frac{1}{4}$	2 $\frac{1}{4}$	57	7	
140	2	9	2 $\frac{1}{4}$	47	7	

SPUR WHEELS.

21

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
141	2	11 $\frac{3}{4}$	2 $\frac{1}{4}$	50	5 $\frac{1}{2}$	
143	2	5 $\frac{1}{4}$	2 $\frac{1}{4}$	41	7	
144	1	9 $\frac{1}{2}$	2 $\frac{1}{4}$	31	7	
145	2	1 $\frac{1}{2}$	2 $\frac{1}{4}$	36	7	
146		9 $\frac{1}{4}$	2 $\frac{1}{4}$	13	7	
147	1	3 $\frac{3}{4}$	2 $\frac{1}{4}$	22	5 $\frac{1}{2}$	
149	15		2 $\frac{1}{4}$	256	5	16 segmt.
123	12		2 $\frac{1}{4}$	201	5 $\frac{1}{2}$	{ 12 segmt. 14 cogs. 3 do. 11 do.
122	16		2 $\frac{1}{4}$	256	5 $\frac{1}{2}$	16 segmt.
121	10		2 $\frac{1}{4}$	168	5 $\frac{1}{2}$	8 segmt.
120	2	4	2 $\frac{1}{4}$	38	5	
438	1	7 $\frac{1}{2}$	2 $\frac{1}{4}$	27	5	
450	19		2 $\frac{1}{4}$	320	7	16 segmt.
451	18	2	2 $\frac{1}{4}$	304	5 $\frac{1}{2}$	16 segmt.
490	1	11 $\frac{1}{4}$	2 $\frac{1}{4}$	29	5 $\frac{1}{2}$	
491	2	1 $\frac{7}{8}$	2 $\frac{1}{4}$	36	7	
492	32	1	2 $\frac{1}{4}$	539	7	{ 35 segmt. 15 cogs. 1 do. 14 do.

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cog.	
	Ft.	In.	Inches.		Inches.	
142	1	3 $\frac{1}{4}$	2 $\frac{3}{16}$	39	4 $\frac{1}{2}$	mortice.
481	9	4	2 $\frac{3}{16}$	160	5 $\frac{1}{2}$	{ 4 segmt. 14 cogs. 8 do. 13 do.
493	3	8 $\frac{1}{4}$	2 $\frac{3}{16}$	65	4 $\frac{1}{2}$	mortice.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
150	6	10 $\frac{5}{8}$	2 $\frac{1}{8}$	120	4	
151	5	4 $\frac{1}{2}$	2 $\frac{1}{8}$	94	4	
152	3	8 $\frac{1}{2}$	2 $\frac{1}{8}$	65	4	
153	2	7 $\frac{1}{2}$	2 $\frac{1}{8}$	46	4	
154	2	$\frac{5}{8}$	2 $\frac{1}{8}$	36	4	
155	2		2 $\frac{1}{8}$	35	4	
156	1	1 $\frac{1}{8}$	2 $\frac{1}{8}$	19	4	
157		11	2 $\frac{1}{8}$	16	3 $\frac{5}{8}$	
158		9	2 $\frac{1}{8}$	13	5	
159	12	10 $\frac{1}{2}$	2 $\frac{1}{8}$	224	3 $\frac{1}{2}$	16 segmt.
160	20		2 $\frac{1}{8}$	352	4	32 segmt.
161	13	8	2 $\frac{1}{8}$	240	4	16 segmt.
162	11	10	2 $\frac{1}{8}$	213	4	16 segmt.
163	10		2 $\frac{1}{8}$	180	4	12 segmt.
164	14		2 $\frac{1}{8}$	252	4	{ 12 segmt. 16 cogs. 4 do. 15 do.
166	11	2	2 $\frac{1}{8}$	192	5 $\frac{1}{4}$	16 segmt.
423	2	9	2 $\frac{1}{8}$	48	5	
167	10		2 $\frac{1}{8}$	180	5	12 segmt.
168	11		2 $\frac{1}{8}$	198	5	18 segmt.
169	2	1	2 $\frac{1}{8}$	37	5	
170	1	5 $\frac{3}{4}$	2 $\frac{1}{8}$	26	5	
171	7	10 $\frac{1}{2}$	2 $\frac{1}{8}$	140	4	10 segmt.
172		11	2 $\frac{1}{8}$	16	4 $\frac{1}{4}$	
173	4	8	2 $\frac{1}{8}$	83	4	{ 3 segmt. 11 cogs. 5 do. 10 do.
174	6		2 $\frac{1}{8}$	105	4	7 segmt. 15 cogs.

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
182	10	10 $\frac{3}{4}$	2 $\frac{1}{8}$	195	5	{ 3 segmt. 13 cogs. 13 do. 12 do.
183	8	1 $\frac{1}{2}$	2 $\frac{1}{8}$	144	5	8 segmt.
184	5	4	2 $\frac{1}{8}$	94	4	{ 6 segmt. 12 cogs. 2 do. 11 do.
185	15		2 $\frac{1}{8}$	265	4	{ 15 segmt. 17 cogs. 1 do. 16 do.
186	5	11 $\frac{1}{2}$	2 $\frac{1}{8}$	106	4	{ 2 segmt. 14 cogs. 6 do. 13 do.
187	2	5	2 $\frac{1}{8}$	43	5	
115	2	3 $\frac{1}{2}$	2 $\frac{1}{8}$	41	5	
109	2	9	2 $\frac{1}{8}$	48	5	
535	1	6 $\frac{3}{8}$	2 $\frac{1}{8}$	27	4	
431	15	10 $\frac{1}{2}$	2 $\frac{1}{8}$	283	4	{ 11 segmt. 18 cogs. 5 do. 17 do.
494	3		2 $\frac{1}{8}$	54	4	mortice.
	12-4		2 $\frac{1}{8}$	216	5	{ 8 segmt. 14 cogs. 8 segmt. 13 cogs.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
175	11	10 $\frac{1}{2}$	2	228	4 $\frac{1}{8}$	12 segmt.
176	10	1	2	192	4	12 segmt.
177	7		2	132	4	12 segmt.
178	1	6 $\frac{3}{8}$	2	29	4 $\frac{1}{8}$	
180		11	2	17	7	
181	14	1 $\frac{1}{2}$	2	256	5	16 segmt.
116	3	1 $\frac{1}{4}$	2	59	5 $\frac{1}{2}$	
444	2	2 $\frac{1}{2}$	2	42	5 $\frac{1}{2}$	
443	5		2	96	4 $\frac{1}{2}$	mortice.
445	11		2	208	6	16 segmt.
495	2	$\frac{1}{4}$	2	38	5	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
188	7	2	$1\frac{7}{8}$	144	$2\frac{3}{4}$	8 segmt.
189		$9\frac{5}{8}$	$1\frac{7}{8}$	16	3	

SPUR WHEELS.

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No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
195	14		$1\frac{3}{4}$	304	4	16 segmt.
196	11	6	$1\frac{3}{4}$	252	$3\frac{3}{4}$	18 segmt.
197	11	4	$1\frac{3}{4}$	252	5	12 segmt.
198	9	10	$1\frac{3}{4}$	216	4	18 segmt.
199	5		$1\frac{3}{4}$	108	4	6 segmt.
200	4	$11\frac{5}{8}$	$1\frac{3}{4}$	108	$4\frac{3}{4}$	
201	3	$4\frac{1}{4}$	$1\frac{3}{4}$	73	$4\frac{3}{4}$	wt. 370 lb.
202	1	$6\frac{7}{8}$	$1\frac{3}{4}$	34	4	
203	1	$5\frac{5}{8}$	$1\frac{3}{4}$	32	$5\frac{1}{4}$	wt. 156 lb.
204	1	$1\frac{7}{8}$	$1\frac{3}{4}$	25	$4\frac{1}{8}$	
205		10	$1\frac{3}{4}$	18	$4\frac{3}{4}$	
206	1	$7\frac{7}{8}$	$1\frac{3}{4}$	36	$3\frac{1}{8}$	
207	7	6	$1\frac{3}{4}$	160	$3\frac{5}{8}$	10 segmt.
208	8	6	$1\frac{3}{4}$	204	$3\frac{1}{2}$	11 segmt.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
209	8		$1\frac{3}{4}$	176	4	16 segmt.
210	1	$1\frac{1}{2}$	$1\frac{3}{4}$	24	$3\frac{5}{8}$	
211	1	$1\frac{1}{2}$	$1\frac{3}{4}$	25	4	
212	10	10	$1\frac{3}{4}$	234	5	18 segmt.
213	6	1	$1\frac{3}{4}$	132	7	
214	1	2	$1\frac{3}{4}$	25	7	
194	1	$\frac{1}{4}$	$1\frac{3}{4}$	22	7	
192		$7\frac{1}{2}$	$1\frac{3}{4}$	14	7	
191	1	5	$1\frac{3}{4}$	31	$4\frac{1}{2}$	
190		$9\frac{1}{2}$	$1\frac{3}{4}$	17	4	
119		$7\frac{3}{4}$	$1\frac{3}{4}$	14	4	
118		6	$1\frac{3}{4}$	11	4	
434	4		$1\frac{3}{4}$	86	4	
433	1	$\frac{1}{4}$	$1\frac{3}{4}$	22	4	
432	3	$\frac{1}{4}$	$1\frac{3}{4}$	65	4	
427	2	$\frac{1}{4}$	$1\frac{3}{4}$	43	4	
426	2	$5\frac{1}{4}$	$1\frac{3}{4}$	53	$4\frac{3}{4}$	
441	9	5	$1\frac{3}{4}$	204	$3\frac{1}{2}$	12 segmt.
496	1	$8\frac{3}{8}$	$1\frac{3}{4}$	36	$3\frac{1}{4}$	
504		$11\frac{7}{8}$	$1\frac{3}{4}$	21	4	
505		$11\frac{1}{2}$	$1\frac{3}{4}$	21	4	
	12-1		$1\frac{3}{4}$	264	4	$\left\{ \begin{array}{l} 9 \times 16 \\ 8 \times 17 \end{array} \right.$

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
225.	7	6	$1\frac{5}{8}$	174	5
226	1		$1\frac{5}{8}$	23	5
227	1	1	$1\frac{5}{8}$	25	5

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
440	2		$1\frac{9}{16}$	48	3	
439	6	11	$1\frac{9}{16}$	128	3	12 segmt.

SPUR WHEELS.

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No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
232	12	1½	1½	288	3	18 segmt.
233	11		1½	272	3½	16 segmt.
234	5	10	1½	144	3	12 segmt.
235	10	2½	1½	256	3	16 segmt.
236	3	7	1½	89	3	
237	2	6	1½	62	3	
238	2	2½	1½	54	3	
239	1	6	1½	37	3	
240		8½	1½	18	3½	
241		8¼	1½	17	3	
242		7¾	1½	15	3	
243	7		1½	180	2¾	12 segmt.
244		6⅞	1½	13	2¾	
245		5⅞	1½	12	3½	
246	1	3	1½	31	3	
247	6		1½	144	4½	
248	5		1½	128	4½	
249	8	4½	1½	216	4	12 segmt.
250	10		1½	152	3¼	12 segmt.
251	7	4	1½	192	3¾	12 segmt.
252	5	10	1½	140	3¼	{ 7 segmt. 18 cogs. 1 do. 14 do.
253	3		1½	75	4½	
254	1	8	1½	42	4½	
255	1	6	1½	38	4½	
401		9	1½	20	4½	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
402	1		$1\frac{1}{2}$	25	$4\frac{1}{2}$	
403		$7\frac{1}{8}$	$1\frac{1}{2}$	15	$4\frac{1}{2}$	
404	2		$1\frac{1}{2}$	50	$3\frac{1}{4}$	
405	4	$4\frac{1}{2}$	$1\frac{1}{2}$	110	$3\frac{1}{4}$	
406	3		$1\frac{1}{2}$	75	$3\frac{1}{4}$	
407	1	$2\frac{3}{8}$	$1\frac{1}{2}$	30	$3\frac{1}{4}$	
408	1		$1\frac{1}{2}$	25	$3\frac{1}{4}$	
409		$8\frac{5}{8}$	$1\frac{1}{2}$	18	$3\frac{1}{4}$	
410		$5\frac{7}{8}$	$1\frac{1}{2}$	12	$3\frac{1}{4}$	
257	25	9	$1\frac{1}{2}$	646	$3\frac{1}{4}$	38 segmt.
258	16	$\frac{1}{2}$	$1\frac{1}{2}$	408	3	24 segmt.
259	1	11	$1\frac{1}{2}$	48	$3\frac{1}{4}$	
284	4	$6\frac{3}{4}$	$1\frac{1}{2}$	115	$3\frac{1}{4}$	
117	5	$2\frac{3}{4}$	$1\frac{1}{2}$	130	3	
425	10	1	$1\frac{1}{2}$	240	3	16 segmt.
424	9	5	$1\frac{1}{2}$	228	3	12 segmt.
497		$10\frac{1}{8}$	$1\frac{1}{2}$	21	$3\frac{1}{4}$	
505	1	8	$1\frac{1}{2}$	42	3	

SPUR WHEELS.

33

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
256	4	1 $\frac{1}{4}$	1 $\frac{3}{8}$	96	3 $\frac{1}{4}$	mortice.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
286	2	4 $\frac{5}{8}$	1 $\frac{1}{4}$	71	2 $\frac{3}{4}$
287	1	7	1 $\frac{1}{4}$	48	2 $\frac{3}{4}$
288	1	2 $\frac{3}{8}$	1 $\frac{1}{4}$	36	2 $\frac{3}{4}$
289	1	1 $\frac{1}{2}$	1 $\frac{1}{4}$	34	2 $\frac{3}{4}$
290	1	$\frac{5}{8}$	1 $\frac{1}{4}$	32	2 $\frac{3}{4}$
291	1		1 $\frac{1}{4}$	30	2 $\frac{3}{4}$
292		10 $\frac{3}{4}$	1 $\frac{1}{4}$	28	2 $\frac{3}{4}$
293		10 $\frac{3}{8}$	1 $\frac{1}{4}$	26	2 $\frac{3}{4}$
294		9 $\frac{3}{8}$	1 $\frac{1}{4}$	24	2 $\frac{3}{4}$
295		8 $\frac{3}{4}$	1 $\frac{1}{4}$	22	2 $\frac{3}{4}$
296		7 $\frac{1}{8}$	1 $\frac{1}{4}$	18	2 $\frac{3}{4}$
297		6 $\frac{1}{4}$	1 $\frac{1}{4}$	16	2 $\frac{5}{8}$
298		4 $\frac{3}{4}$	1 $\frac{1}{4}$	12	2 $\frac{3}{4}$
299		4 $\frac{1}{2}$	1 $\frac{1}{4}$	11	2 $\frac{7}{8}$
300	1	2 $\frac{1}{8}$	1 $\frac{1}{4}$	38	1 $\frac{5}{8}$
301		7 $\frac{1}{2}$	1 $\frac{1}{4}$	19	1 $\frac{5}{8}$
302	2	6	1 $\frac{1}{4}$	75	3 $\frac{3}{4}$
285	1	5 $\frac{1}{2}$	1 $\frac{1}{4}$	44	3 $\frac{3}{4}$

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
282	2	$\frac{1}{2}$	$1\frac{3}{16}$	65	$2\frac{1}{4}$
283		$4\frac{1}{8}$	$1\frac{3}{16}$	11	$2\frac{1}{2}$
498	1	10	$1\frac{3}{16}$	58	3
499	1	$3\frac{5}{8}$	$1\frac{3}{16}$	42	3
262	3	$7\frac{3}{4}$	$1\frac{1}{8}$	116	3
263	3	$\frac{1}{8}$	$1\frac{1}{8}$	96	3
264	2	$\frac{1}{2}$	$1\frac{1}{8}$	65	3

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
265	1	8	$1\frac{1}{8}$	53	3	
266	1	6	$1\frac{1}{8}$	48	3	
267	1	2	$1\frac{1}{8}$	37	3	
268		$10\frac{1}{4}$	$1\frac{1}{8}$	27	3	
269		9	$1\frac{1}{8}$	24	3	
270		$6\frac{1}{8}$	$1\frac{1}{8}$	16	3	
271		$4\frac{1}{8}$	$1\frac{1}{8}$	10	$2\frac{3}{4}$	
272	19	6	$1\frac{1}{8}$	630	3	30 segmt.
273	1	4	$1\frac{1}{8}$	43	3	
274	1		$1\frac{1}{8}$	32	$2\frac{1}{4}$	
275		$7\frac{7}{8}$	$1\frac{1}{8}$	21	$2\frac{1}{4}$	
276		$4\frac{1}{4}$	$1\frac{1}{8}$	11	3	
277	2	$3\frac{3}{4}$	$1\frac{1}{8}$	78	$2\frac{5}{8}$	
278		$5\frac{5}{8}$	$1\frac{1}{8}$	16	$2\frac{5}{8}$	
279		$9\frac{1}{4}$	$1\frac{1}{8}$	27	$2\frac{3}{4}$	
280		8	$1\frac{1}{8}$	21	3	
281		7	$1\frac{1}{8}$	18	3	
228	3	4	$1\frac{1}{8}$	106	3	
229	2	6	$1\frac{1}{8}$	80	3	
230		$11\frac{3}{4}$	$1\frac{1}{8}$	31	3	
231		8	$1\frac{1}{8}$	22	$2\frac{1}{2}$	
260	1	$2\frac{1}{2}$	$1\frac{1}{8}$	39	$2\frac{1}{4}$	
261	1	$9\frac{1}{2}$	$1\frac{1}{8}$	60	$2\frac{1}{2}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
304	1	6	1 $\frac{1}{16}$	54	2
305	1		1 $\frac{1}{16}$	36	2
306	2		1 $\frac{1}{16}$	72	2
307	1	2	1 $\frac{1}{16}$	41	2
308		6	1 $\frac{1}{16}$	18	2

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
309		8	$1\frac{1}{16}$	24	2	
409 $\frac{1}{2}$		5	$1\frac{1}{16}$	15	2	
410 $\frac{1}{2}$		$4\frac{7}{8}$	$1\frac{1}{16}$	14	$2\frac{7}{8}$	
303	1	$8\frac{3}{4}$	$1\frac{1}{16}$	59	$2\frac{1}{2}$	
336	1	8	$1\frac{1}{16}$	58	2	
310	4	6	1	168	$4\frac{1}{2}$	6 segmt.
311	4	5	1	162	$3\frac{1}{2}$	6 segmt.
312	4		1	150	$2\frac{1}{4}$	6 segmt.
313		8	1	25	$4\frac{1}{2}$	
314		$8\frac{1}{4}$	1	25	$3\frac{1}{2}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.			
315		4	1	12	$3\frac{3}{4}$
316	2	$4\frac{3}{8}$	1	90	3
317		$9\frac{3}{4}$	1	31	3
318		$9\frac{3}{8}$	1	30	3
319		$6\frac{7}{8}$	1	22	3
320		$4\frac{3}{4}$	1	15	3
321		$3\frac{5}{8}$	1	11	3
322	1	4	1	50	$2\frac{1}{4}$
323		8	1	25	$2\frac{1}{4}$
324		$6\frac{1}{4}$	1	19	$2\frac{1}{4}$
325		$4\frac{1}{4}$	1	13	$2\frac{1}{4}$
326	1	$4\frac{1}{8}$	1	52	$1\frac{1}{4}$
327		7	1	23	$1\frac{1}{4}$
328	2	$7\frac{5}{8}$	1	101	$2\frac{1}{4}$
329	2	$2\frac{1}{4}$	1	79	$2\frac{1}{4}$
330		$7\frac{3}{4}$	1	25	$2\frac{1}{4}$
331		$6\frac{1}{8}$	1	20	$2\frac{3}{8}$
332		5	1	16	$2\frac{1}{4}$
411		$4\frac{1}{8}$	1	13	$2\frac{1}{4}$
412		$3\frac{3}{16}$	1	10	$2\frac{1}{4}$
335	2	$9\frac{1}{4}$	1	103	2

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
390	2		$\frac{7}{8}$	87	2
382		10	$\frac{7}{8}$	35	2
381		$4\frac{1}{2}$	$\frac{7}{8}$	16	2
353		4	$\frac{7}{8}$	15	2
500	1		$\frac{7}{8}$	36	2

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
333	1	2 $\frac{3}{8}$	$\frac{13}{16}$	56	$1\frac{3}{16}$
334		4 $\frac{3}{8}$	$\frac{13}{16}$	17	$1\frac{3}{16}$
340	2	$\frac{1}{4}$	$\frac{3}{4}$	100	3
341	1	$\frac{1}{8}$	$\frac{3}{4}$	50	3
342		7 $\frac{1}{8}$	$\frac{3}{4}$	33	3
343		6 $\frac{5}{8}$	$\frac{3}{4}$	27	3
344		3 $\frac{7}{8}$	$\frac{3}{4}$	16	3
345	3	5 $\frac{3}{8}$	$\frac{3}{4}$	169	2
346		10 $\frac{1}{8}$	$\frac{3}{4}$	41	2

SPUR WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
347		7 $\frac{1}{8}$	$\frac{3}{4}$	29	2	
348		6 $\frac{3}{8}$	$\frac{3}{4}$	26	2	
349		3 $\frac{1}{2}$	$\frac{3}{4}$	14	2	
350	2	5 $\frac{3}{8}$	$\frac{3}{4}$	120	1 $\frac{1}{2}$	
351	1	9 $\frac{1}{4}$	$\frac{3}{4}$	87	1 $\frac{1}{2}$	
352	1	2 $\frac{5}{8}$	$\frac{3}{4}$	60	1 $\frac{1}{2}$	
354	1	$\frac{3}{8}$	$\frac{3}{4}$	50	1 $\frac{1}{2}$	
355		10 $\frac{1}{2}$	$\frac{3}{4}$	43	1 $\frac{1}{2}$	
356		9 $\frac{3}{4}$	$\frac{3}{4}$	40	1 $\frac{1}{2}$	
357		8 $\frac{3}{4}$	$\frac{3}{4}$	36	1 $\frac{1}{2}$	
358		7 $\frac{7}{8}$	$\frac{3}{4}$	32	1 $\frac{1}{2}$	
359		5 $\frac{7}{8}$	$\frac{3}{4}$	25	1 $\frac{1}{2}$	
360		5 $\frac{3}{8}$	$\frac{3}{4}$	22	1 $\frac{1}{2}$	
361		4 $\frac{5}{8}$	$\frac{3}{4}$	19	1 $\frac{1}{2}$	
362		3 $\frac{5}{8}$	$\frac{3}{4}$	15	1 $\frac{1}{2}$	
363		3	$\frac{3}{4}$	12	1 $\frac{1}{2}$	
364		2 $\frac{1}{4}$	$\frac{3}{4}$	9	1 $\frac{1}{2}$	
365	2	$\frac{1}{4}$	$\frac{3}{4}$	98	1 $\frac{1}{2}$	
366		11 $\frac{7}{8}$	$\frac{3}{4}$	48	$\frac{7}{8}$	
367		3 $\frac{1}{2}$	$\frac{3}{4}$	14	$\frac{7}{8}$	
368		11	$\frac{3}{4}$	48	1 $\frac{1}{2}$	
369		2 $\frac{7}{8}$	$\frac{3}{4}$	12	1 $\frac{3}{4}$	
370		8 $\frac{3}{4}$	$\frac{3}{4}$	36	1 $\frac{1}{4}$	
371		5	$\frac{3}{4}$	20	1 $\frac{3}{8}$	
372		3 $\frac{1}{2}$	$\frac{3}{4}$	14	1 $\frac{3}{8}$	
413		2 $\frac{7}{8}$	$\frac{3}{4}$	12	1 $\frac{1}{2}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
339	1	6	$\frac{3}{4}$	74	$1\frac{1}{2}$
502	2	2	$\frac{3}{4}$	109	3
503		$4\frac{5}{8}$	$\frac{3}{4}$	19	3
373	1	$2\frac{1}{2}$	$\frac{11}{16}$	64	1
374		3	$\frac{11}{16}$	13	1
375	1	$5\frac{1}{2}$	$\frac{5}{8}$	88	2
376	1	3	$\frac{5}{8}$	75	2
377		5	$\frac{5}{8}$	25	2

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.			
378		2 $\frac{3}{8}$	$\frac{5}{8}$	12	2
379	1	$\frac{1}{2}$	$\frac{5}{8}$	60	$\frac{7}{8}$
380		3 $\frac{1}{8}$	$\frac{5}{8}$	15	$\frac{7}{8}$
383	1	2 $\frac{5}{8}$	$\frac{9}{16}$	80	1 $\frac{1}{4}$
384		2 $\frac{1}{16}$	$\frac{9}{16}$	11	1 $\frac{1}{4}$
385	1	4 $\frac{3}{4}$	$\frac{9}{16}$	96	1 $\frac{1}{4}$
386		4 $\frac{1}{8}$	$\frac{9}{16}$	24	1 $\frac{1}{2}$
414		4	$\frac{9}{16}$	24	1 $\frac{1}{2}$
415		3 $\frac{1}{8}$	$\frac{9}{16}$	23	1 $\frac{1}{8}$
416		2 $\frac{1}{4}$	$\frac{9}{16}$	13	1 $\frac{3}{4}$
417		2 $\frac{1}{8}$	$\frac{9}{16}$	12	1 $\frac{1}{2}$

SPUR WHEELS.

45

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
387		9 $\frac{7}{8}$	$\frac{1}{2}$	64	1 $\frac{3}{8}$
388		6 $\frac{3}{4}$	$\frac{1}{2}$	44	1 $\frac{3}{8}$
389		3	$\frac{1}{2}$	19	1 $\frac{5}{16}$
391		11 $\frac{7}{8}$	$\frac{3}{8}$	96	1 $\frac{1}{8}$
392		6	$\frac{3}{8}$	48	1
393		4 $\frac{1}{4}$	$\frac{3}{8}$	34	1 $\frac{1}{4}$
394	1	3 $\frac{1}{2}$	$\frac{3}{8}$	126	1 $\frac{1}{8}$
14		9 $\frac{3}{4}$	$\frac{5}{16}$	90	1 $\frac{1}{16}$

BEVEL WHEELS.

47

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
1	1	5 $\frac{1}{4}$	3	18	4 $\frac{1}{2}$	{ To run with wooden wheel of 54 cogs.
174	2		3	25	6 $\frac{3}{8}$	
173	9	7	3	120	6 $\frac{3}{8}$	12 segmt.
189	7	8	3	96	5 $\frac{5}{8}$	
190	2		3	25	5 $\frac{5}{8}$	
203	5	1 $\frac{1}{4}$	2 $\frac{7}{8}$	66	6	}
204	2	$\frac{1}{4}$	2 $\frac{7}{8}$	26	6	
23	2	8	2 $\frac{3}{4}$	36	6	}
24	3		2 $\frac{3}{4}$	41	6	
2	3		2 $\frac{3}{4}$	41	6	
						mortice.

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
183	2	10	$2\frac{11}{16}$	40	6	12 segmt.
182	6	$8\frac{1}{2}$	$2\frac{11}{16}$	96	6	
176	3	1	$2\frac{5}{8}$	44	8	
175	5	$\frac{5}{8}$	$2\frac{5}{8}$	73	8	

BEVEL WHEELS.

49

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
3	3	1 $\frac{1}{4}$	2 $\frac{5}{8}$	45	6 $\frac{1}{4}$	} 16 segmt.
4	13	2	2 $\frac{5}{8}$	192	6 $\frac{1}{4}$	
145	12		2 $\frac{5}{8}$	176	7 $\frac{5}{8}$	} 16 segmt.
146	3	$\frac{3}{8}$	2 $\frac{5}{8}$	45	7 $\frac{5}{8}$	
147	8	10	2 $\frac{5}{8}$	128	7	} 16 segmt.
148	2	11	2 $\frac{5}{8}$	42	7	
201	3	8 $\frac{1}{2}$	2 $\frac{5}{8}$	53	7	}
202	2	5 $\frac{1}{4}$	2 $\frac{5}{8}$	35	7	
8-10 2 $\frac{5}{8}$ 128 7-8 segts						

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
25	2		$2\frac{9}{16}$	29	7	} 16 segmt.
26	5	2	$2\frac{9}{16}$	75	7	
32	2	7	$2\frac{9}{16}$	37	7	
33	5	2	$2\frac{9}{16}$	75	7	
185	3	$6\frac{1}{2}$	$2\frac{9}{16}$	52	$7\frac{1}{2}$	
184	11	$4\frac{1}{2}$	$2\frac{9}{16}$	170	$7\frac{1}{2}$	
5	1	8	$2\frac{1}{2}$	25	$6\frac{1}{2}$	} $\frac{5}{6}$ segmt. 18 cogs. do. 12 do.
6	9	11	$2\frac{1}{2}$	150	$6\frac{1}{2}$	

BEVEL WHEELS.

51

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
7	4	4½	2½	66	5½	} mortice.
8	1	4	2½	20	5½	
9	1	4½	2½	20	6½	
150	4	6	2½	68	5	
151	2	3	2½	34	5	
152	2	6	2½	38	5	} 16 segmt.
153	1	6½	2½	23	5	
101	3	7	2½	53	6	
102	2	4	2½	35	6	
50	2	4½	2½	36	6	
51	12	8	2½	192	6	

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
11	3	$9\frac{1}{2}$	$2\frac{3}{8}$	60	6	} 16 segmt.
12	2	$\frac{1}{4}$	$2\frac{3}{8}$	32	6	
13	3	$6\frac{5}{8}$	$2\frac{3}{8}$	56	7	
14	9	2	$2\frac{3}{8}$	154	7	} 16 segmt.
15	3	$5\frac{1}{2}$	$2\frac{3}{8}$	53	$5\frac{1}{2}$	
16	11	3	$2\frac{3}{8}$	176	$5\frac{1}{2}$	
17	3	$3\frac{1}{2}$	$2\frac{3}{8}$	51	$7\frac{1}{4}$	} 16 segmt.
18	10	3	$2\frac{3}{8}$	160	$7\frac{1}{4}$	
19	2	$4\frac{3}{4}$	$2\frac{3}{8}$	37	$5\frac{1}{2}$	
20	10		$2\frac{3}{8}$	156	$5\frac{1}{2}$	} 12 segmt.
21	3	$\frac{1}{2}$	$2\frac{3}{8}$	48	3	
22		10	$2\frac{3}{8}$	13	3	

BEVEL WHEELS.

53

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
30	2	11½	2 $\frac{5}{16}$	32	6	} 12 segmt.
31	8		2 $\frac{5}{16}$	132	6	
36	3	1¼	2¼	52	5	} 16 segmt.
37	2	1	2¼	35	5	
38	15	7	2¼	156	5	
39	2	4	2¼	38	5	

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
35	4	3½	2¼	72	7	} mortice.
34	1	9½	2¼	30	7	
	1-6		2¼	42	4¾	
40	2	½	2⅛	36	4	} 12 segmt.
41	10		2⅛	180	4	
	1-¼		2⅛	18	4	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
46	1	6 $\frac{1}{8}$	2 $\frac{1}{16}$	27	4	} 12 segmt.
47	9		2 $\frac{1}{16}$	168	4	
48	4		2 $\frac{1}{16}$	72	4 $\frac{1}{2}$	
49	2	$\frac{3}{4}$	2 $\frac{1}{16}$	37	4 $\frac{1}{2}$	
178	1	3 $\frac{3}{4}$	2	24	4 $\frac{1}{2}$	} 6 segmt.
177	3	10 $\frac{1}{2}$	2	72	4 $\frac{1}{2}$	
54	4	$\frac{3}{8}$	2	76	5	
55	2	$\frac{1}{4}$	2	38	5	
56	3	4 $\frac{3}{4}$	2	64	5	} mortice.
57	2	6	2	47	5	
58	4	10	2	91	6	
59	1	7 $\frac{1}{2}$	2	30	6	
60	8	3	2	156	5	} 12 segmt.
61	1	7 $\frac{1}{4}$	2	30	5	
53	3	$\frac{1}{4}$	2	56	5	
52	1	1	2	20	5	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.			Inches.	
70	1	8	2	32	6	} mortice.
71	2	6	2	48	6	
42	1	7 $\frac{3}{4}$	2	31	5 $\frac{1}{2}$	} mortice.
43	4	2	2	76	5 $\frac{1}{2}$	
191	3	7 ³ / ₈	2	57	6	} mortice.
192	2	8	2	50	6	
197	4	8 $\frac{7}{8}$	2	88	7	} mortice.
198	2	5 $\frac{1}{8}$	2	45	7	

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No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
54½	3	3¾	1½	64	3⅞	}
55½		10	1½	16	3⅞	
62	1	7¼	1⅞	32	5½	} 18 segmt.
63	10	9	1⅞		5½	
64	5	6	1⅞	110	4	
65		8	1⅞	13	5	
44	2	2¼	1⅞	43	6	
45	8	7	1⅞	171	6	

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
180	1	4 $\frac{1}{2}$	1 $\frac{1}{16}$	28	5	}
179	4	$\frac{1}{2}$	1 $\frac{1}{16}$	84	5	
199	4	9 $\frac{3}{4}$	1 $\frac{3}{4}$	102	5	} mortice.
200	1	4 $\frac{3}{8}$	1 $\frac{3}{4}$	29	5	
193	5		1 $\frac{3}{4}$	110	8 $\frac{3}{4}$	} 640 lbs.
194	1		1 $\frac{3}{4}$	22	3 $\frac{3}{4}$	
68	8	5 $\frac{3}{4}$	1 $\frac{3}{4}$	75	4 $\frac{3}{4}$	
69	1	6 $\frac{3}{4}$	1 $\frac{3}{4}$	33	4 $\frac{3}{4}$	

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
72	2		$1\frac{11}{16}$	44	3 }
73	1	$5\frac{3}{4}$	$1\frac{11}{16}$	33	3 }
76	3		$1\frac{5}{8}$	68	4 }
77	1	$5\frac{1}{2}$	$1\frac{5}{8}$	33	4 }

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
78	1	7 $\frac{1}{2}$	1 $\frac{5}{8}$	37	4	
79	2	10 $\frac{1}{4}$	1 $\frac{5}{8}$	66	3 $\frac{3}{4}$	} 8 segmt.
80	2	4 $\frac{5}{8}$	1 $\frac{5}{8}$	55	3 $\frac{3}{4}$	
81	6	3 $\frac{1}{2}$	1 $\frac{5}{8}$	144	3	
82		19 $\frac{3}{4}$	1 $\frac{5}{8}$	37	3	
195	2	8	1 $\frac{5}{8}$	62	5	
196	1	1	1 $\frac{5}{8}$	25	5	}
197	1	10	1 $\frac{5}{8}$	42	3	
198		11	1 $\frac{5}{8}$	21	3	
87	5		1 $\frac{9}{16}$	125	3 $\frac{1}{4}$	} 500 lbs.
88	1		1 $\frac{9}{16}$	21	3 $\frac{1}{4}$	
85	5		1 $\frac{9}{16}$	120	3 $\frac{1}{2}$	} 6 segmt.
86		10	1 $\frac{9}{16}$	20	3 $\frac{1}{2}$	
188	2	6	1 $\frac{9}{16}$	60	3 $\frac{1}{2}$	
187	1	8	1 $\frac{9}{16}$	40	3 $\frac{1}{2}$	

BEVEL WHEELS.

61

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
91		9½	1½	20	2¾	} 6 segmt.
92	6		1½	150	2¾	
93	3	8⅛	1½	92	3½	
94	1	8⅝	1½	43	3½	} 12 segmt.
95	8	7½	1½	216	3¾	
96	1	3	1½	31	3¾	
97	5		1½	128	3¾	} 8 segmt.
98		10⅛	1½	21	3¾	
154	2	1	1½	54	3⅝	
155	1	½	1½	27	3⅝	} mortice.
160	2	6	1½	64	3	
161	1	2½	1½	31	3	
	10—		1½	252	3¾	} 12 segts
	1—		1½	25	3¾	

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
99	2	6	$1\frac{7}{16}$	64	4	} mortice.
100	1	3	$1\frac{7}{16}$	32	4	
105	3		$1\frac{3}{8}$	81	3	} .
106	1		$1\frac{3}{8}$	27	3	
107	1	6	$1\frac{3}{8}$	41	$2\frac{3}{4}$	
108		11	$1\frac{3}{8}$	25	$2\frac{3}{4}$	
109	1	$3\frac{1}{4}$	$1\frac{3}{8}$	35	$2\frac{7}{8}$	
110	1	$\frac{1}{8}$	$1\frac{3}{8}$	28	$2\frac{7}{8}$	
111	4		$1\frac{3}{8}$	112	$3\frac{3}{4}$	
112	1		$1\frac{3}{8}$	28	$3\frac{3}{4}$	
113	2	8	$1\frac{3}{8}$	72	$3\frac{1}{4}$	
114		8	$1\frac{3}{8}$	18	$3\frac{1}{4}$	

BEVEL WHEELS.

63

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
115	1	6	$1\frac{3}{8}$	40	3 }
116	1	$3\frac{3}{4}$	$1\frac{3}{8}$	35	3 }
156	2	6	$1\frac{5}{16}$	72	$3\frac{1}{4}$ }
157	1	3	$1\frac{5}{16}$	36	$3\frac{1}{4}$ }
117	2	$\frac{1}{4}$	$1\frac{1}{4}$	60	$2\frac{3}{4}$ }
118		$9\frac{5}{8}$	$1\frac{1}{4}$	24	$2\frac{3}{4}$ }

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
119	17	9	$1\frac{1}{4}$	528	3	24 segmt.
120	1	2	$1\frac{1}{4}$	34	3	
121	5	6	$1\frac{1}{4}$	166	$4\frac{7}{8}$	
122		6	$1\frac{1}{4}$	15	$4\frac{7}{8}$	
123 $\frac{1}{2}$	10	1	$1\frac{1}{4}$	304	3	16 segmt.
124 $\frac{1}{2}$	1		$1\frac{1}{4}$	30	3	
125 $\frac{1}{2}$	8	6	$1\frac{1}{4}$	126	3	16 segmt.
126 $\frac{1}{2}$	1	3	$1\frac{1}{4}$	38	3	
158	1	1	$1\frac{1}{4}$	32	$2\frac{1}{8}$	
159		$6\frac{1}{2}$	$1\frac{1}{4}$	16	$2\frac{1}{8}$	
162	2	$1\frac{1}{4}$	$1\frac{1}{4}$	60	$3\frac{1}{2}$	
163		$5\frac{1}{2}$	$1\frac{1}{4}$	13	$3\frac{1}{2}$	

BEVEL WHEELS.

65

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
165	12		$1\frac{3}{16}$	404	$2\frac{3}{4}$ } 16 segmt.
166	1	2	$1\frac{3}{16}$	37	$2\frac{3}{4}$ }
123	2	$7\frac{1}{2}$	$1\frac{1}{8}$	86	$2\frac{3}{8}$ }
124	1	7	$1\frac{1}{8}$	51	$2\frac{3}{8}$ }
125	2		$1\frac{1}{8}$	66	$3\frac{1}{4}$ }
126	1		$1\frac{1}{8}$	33	$3\frac{1}{4}$ }
167	2	$8\frac{1}{4}$	$1\frac{1}{8}$	88	3 }
168		$5\frac{7}{8}$	$1\frac{1}{8}$	16	3 }

BEVEL WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
169	2	4 $\frac{1}{2}$	1 $\frac{1}{8}$	88	3 }
170		7	1 $\frac{1}{8}$	22	3 }
	1-2 $\frac{3}{4}$		1 $\frac{1}{8}$	41	2 $\frac{1}{4}$
	-1 $\frac{1}{4}$		1 $\frac{1}{8}$	12	2 $\frac{1}{4}$
127	2	4 $\frac{1}{2}$	1 $\frac{1}{16}$	81	3 $\frac{1}{8}$ }
128		9 $\frac{1}{2}$	1 $\frac{1}{16}$	27	3 $\frac{1}{8}$ }
27	1	6 $\frac{1}{2}$	1 $\frac{1}{16}$	54	2 $\frac{3}{4}$ }
28		9 $\frac{1}{4}$	1 $\frac{1}{16}$	27	2 $\frac{3}{4}$ }
129	2	2 $\frac{1}{4}$	1	85	2 $\frac{1}{2}$ }
130		6 $\frac{1}{2}$	1	21	2 $\frac{1}{2}$ }

BEVEL WHEELS.

67

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
137	1	$5\frac{3}{4}$	$\frac{15}{16}$	60	$1\frac{1}{4}$ }
138		$11\frac{5}{8}$	$\frac{15}{16}$	40	$1\frac{1}{4}$ }
141	1	$3\frac{1}{4}$	$\frac{7}{8}$	54	$2\frac{1}{2}$ }
142		$7\frac{5}{8}$	$\frac{7}{8}$	27	$2\frac{1}{2}$ }

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
143	1	$2\frac{3}{4}$	$\frac{3}{4}$	60	$1\frac{1}{8}$ }
144		$4\frac{7}{8}$	$\frac{3}{4}$	20	$1\frac{1}{8}$ }
172		$6\frac{7}{8}$	$\frac{3}{4}$	28	$2\frac{1}{4}$ }
171	1	$8\frac{1}{2}$	$\frac{3}{4}$	84	$2\frac{1}{4}$ }

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
3	3	10	$2\frac{3}{4}$	52	8
19	1	6	$2\frac{5}{8}$	35	7
40	3	1	$2\frac{5}{8}$	44	8
1	1	8	$2\frac{1}{2}$	25	5

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
2	1	6½	2¼	25	5½
28	1	10	2⅛	32	6 mortice.
33	1	10	2⅛	32	6
4	2	11¾	2	53	4¾

MITRE WHEELS.

71

No.	Diameter.		Pitch.	No. Cog.	Length of Cog.	
	Ft.	In.	Inches.		Inches.	
6	3	7 $\frac{3}{4}$	2	69	4 $\frac{3}{4}$	
7	2	1 $\frac{1}{4}$	2	40	4	
8	3		2	55	6	mortice.
9	3		2	56	6	
5	1	$\frac{1}{2}$	2	19	5	
41	2	6	2	47	5 $\frac{1}{2}$	
42	2	6 $\frac{5}{8}$	2	48	5 $\frac{1}{2}$	mortice.
10	2	$\frac{5}{8}$	1 $\frac{15}{16}$	40	4 $\frac{1}{8}$	
11	2	$\frac{5}{8}$	1 $\frac{15}{16}$	40	4 $\frac{1}{8}$	mortice.

MITRE WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
12	1	3 $\frac{1}{4}$	1 $\frac{3}{4}$	27	4
13	3	4	1 $\frac{3}{4}$	71	4 $\frac{1}{2}$
14	1	$\frac{1}{2}$	1 $\frac{1}{2}$	26	2 $\frac{7}{8}$
15	2	5 $\frac{1}{2}$	1 $\frac{1}{2}$	63	2 $\frac{3}{16}$
18	2		1 $\frac{1}{2}$	49	3 $\frac{1}{2}$
16	1	$\frac{1}{4}$	1 $\frac{7}{16}$	27	3 $\frac{5}{8}$
17	1	4 $\frac{3}{4}$	1 $\frac{7}{16}$	37	3

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
23	1	9	$1\frac{5}{8}$	39	4	
24	1	$8\frac{1}{2}$	$1\frac{5}{8}$	40	4	mortice.
20	1		$1\frac{3}{8}$	28	3	
43	1	4	$1\frac{1}{4}$	40	3	
21	1	8	$1\frac{1}{4}$	50	$3\frac{1}{8}$	
22	1	$\frac{5}{8}$	$1\frac{1}{4}$	31	$1\frac{3}{4}$	

MITRE WHEELS.

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.	
	Ft.	In.	Inches.		Inches.	
25	1	3	$1\frac{1}{8}$	42	$2\frac{1}{4}$	
26	1	2	$1\frac{1}{8}$	39	$2\frac{1}{4}$	
27	1	6	$1\frac{1}{8}$	50	$3\frac{1}{4}$	
29	1	7	1	59	$2\frac{7}{8}$	
36	1	$5\frac{3}{4}$	$1\frac{5}{16}$	58	$2\frac{1}{8}$	

MITRE WHEELS.

75

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.			
38		10	$\frac{7}{8}$	34	$2\frac{1}{4}$
39		6	$\frac{7}{8}$	22	$1\frac{1}{4}$
30		9	$\frac{3}{4}$	38	$1\frac{5}{8}$
31		$8\frac{5}{8}$	$\frac{3}{4}$	36	$1\frac{3}{8}$
44		$9\frac{5}{8}$	$\frac{3}{4}$	40	$1\frac{3}{4}$
32	1		$\frac{1}{2}$	78	$1\frac{1}{4}$
34		$5\frac{3}{8}$	$\frac{3}{8}$	45	$\frac{5}{8}$
35		$3\frac{7}{8}$	$\frac{3}{8}$	30	$\frac{5}{8}$

No.	Diameter.	Pitch.	No. Cogs.	Length of Cogs.
	Ft. In.	Inches.		Inches.
1	Rack.	$2\frac{1}{8}$	14	$2\frac{1}{2}$
2	$11\frac{1}{8}$	$2\frac{1}{8}$	16	3
30	Rack.	$1\frac{3}{4}$	22	$3\frac{5}{8}$
210	1 $1\frac{5}{8}$	$1\frac{3}{4}$	24	$3\frac{5}{8}$
3	Rack.	$1\frac{1}{8}$	31	3
4	$4\frac{7}{8}$	$1\frac{1}{8}$	13	3

RACKS AND PINIONS.

79

No.	Diameter.		Pitch.	No. Cogs.	Length of Cogs.
	Ft.	In.	Inches.		Inches.
25	Rack.		$\frac{9}{16}$	140	2
26		3	$\frac{9}{16}$	18	$2\frac{1}{4}$
27	Rack.		$\frac{9}{16}$	68	$1\frac{1}{2}$
28		$4\frac{1}{4}$	$\frac{9}{16}$	23	$1\frac{1}{2}$
47	Rack.		$\frac{5}{16}$	157	2
48		$3\frac{7}{8}$	$\frac{5}{16}$	38	2
45	Rack.		$\frac{3}{8}$	138	$1\frac{1}{4}$
46		$1\frac{1}{2}$	$\frac{3}{8}$	12	$1\frac{1}{2}$

No.	Diameter.		Face.		Lbs.	
	Ft.	In.	Ft.	In.		
1	12		2	1	9000	
2	12		1	9	6160	
3	12		2	1	6840	
4	10		1	8	4200	
5	10		1	4	3700	
6	10		1	4	3750	
7	9		1	8	3250	
8	9		1	5	3000	
9	8		1	6	2510	
10	8		1	2	2100	
11	7		1	2	2475	
12	7		1	2	1550	
13	6			11	1045	
14	5		1		840	
15	5		1	8	1730	Wrought arms.
16	4			9	400	
17	4	$1\frac{1}{8}$		$3\frac{5}{8}$		
18	3			8	225	
19	3			6	120	
20	3			9	210	
21	3			6		
22	3		1	2	300	Strong arms.
23	3			$9\frac{1}{2}$		
24	2	6		$9\frac{1}{2}$		
25	2	6		6		
26	2	$4\frac{1}{8}$		5		

No.	Diameter.		Face.		Lbs.	
	Ft.	In.	Ft.	In.		
27	2	4		6		
28	2	2		6		
29	2	$\frac{1}{4}$		$4\frac{1}{2}$		
30	2			$10\frac{1}{2}$		
31	2			6		
32	2			3		
33	2			8		
34	1	10		6		
35	1	9		9		
36	1	$9\frac{1}{2}$		$4\frac{1}{2}$		
37	1	$8\frac{3}{4}$		$2\frac{1}{2}$		
38	1	8		6		Half pulley.
39	1	$7\frac{1}{4}$		6		
40	1	8		6		
41	1	8		$4\frac{1}{2}$		
42	1	$6\frac{1}{8}$	1	$1\frac{1}{4}$		
43	1	6		8		
44	1	$5\frac{1}{4}$		6		
45	1	$4\frac{1}{4}$		6		
46	1	4		7		
47	1	4		2		
48	1	6		6		
49	1	6		$4\frac{1}{2}$		
50	1	6		$3\frac{1}{2}$		
51	1	4		$4\frac{1}{4}$		
52	1	4		$3\frac{1}{2}$		

No.	Diameter.		Face.		Lbs.
	Ft.	In.	Ft.	In.	
53	1	4		9	
54	1	3		$2\frac{5}{8}$	
55	1	$2\frac{7}{8}$		$2\frac{3}{8}$	
56	1	2	10		
57	1	2		6	
58	1	2		$4\frac{1}{2}$	
59	1	$1\frac{5}{8}$		$3\frac{3}{8}$	
60	1	$1\frac{1}{8}$		6	
61	1	$\frac{1}{4}$		5	
62	1			$4\frac{3}{4}$	
63	1			$2\frac{3}{8}$	
64	1			$1\frac{5}{8}$	
65	1		1		
66		$11\frac{3}{4}$		$2\frac{3}{8}$	
67		$11\frac{1}{8}$		6	
68		11		$8\frac{1}{8}$	
69		11		$3\frac{3}{8}$	
70		10		4	
71		10		$2\frac{5}{8}$	
72		10		6	
73		10		$4\frac{1}{2}$	
74		$9\frac{3}{8}$		6	
75		9		$8\frac{1}{8}$	
76		9		$2\frac{1}{2}$	
77		$8\frac{1}{4}$		3	
78		7		7	

PULLEYS.

83

No.	Diameter.		Face.		Lbs.
	Ft.	In.	Ft.	In.	
79		7		6	
80	.	8		10	
81		8		6	
82		6 $\frac{3}{8}$		1 $\frac{5}{8}$	
83		6		2 $\frac{1}{2}$	
84		5 $\frac{1}{2}$		2 $\frac{1}{2}$	
85		6		6	
86		5		6	
87		5		5	
88		6		4 $\frac{1}{2}$	

84 FLY WHEELS — SQUARE RIMS.

No.	Diameter.		Face.	Depth.	Lbs.	
	Ft.	In.	Inches.	Inches.		
36	5	8			1200	Cast iron arms.
8	4	6	$2\frac{1}{4}$	$3\frac{7}{8}$		
9	4		2	3		
10	3	$10\frac{3}{4}$	$2\frac{1}{2}$	$3\frac{1}{2}$		
11	3	6	$2\frac{1}{4}$	$2\frac{1}{2}$		
12	3	6	$1\frac{5}{8}$	$2\frac{1}{2}$		Wro't. iron arms.
35	3	4			300	
13	3	$3\frac{3}{4}$	3	$2\frac{1}{4}$		
14	3	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{7}{8}$		
15	2	$7\frac{3}{4}$	2	$3\frac{3}{4}$		
16	2	$7\frac{3}{8}$	$2\frac{1}{2}$	$1\frac{3}{8}$		
17	2	6	$2\frac{3}{4}$	$1\frac{1}{4}$		
18	1	$5\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{8}$		
19	1	$5\frac{7}{8}$	$\frac{1}{2}$	1		
20	1	$2\frac{5}{8}$	1	$1\frac{1}{2}$		
21	1		$\frac{3}{4}$	$\frac{3}{4}$		
22	1	$\frac{1}{4}$	$1\frac{3}{8}$	Round.		
23	8	1	$4\frac{1}{2}$	6	2800	Wrought arms.

FLY WHEELS — OVAL RIMS. 85

No.	Diameter.		Lbs.		
	Ft.	In.			
23	10		2000	Wro't. iron arms.	
24	9		2450	Wro't. iron arms.	
25	8		1700		
26	7	2	1000		
27	6	10	800		
4	5				
28	5	9	600		
29	5	1	400		
2	4	11 $\frac{3}{4}$			
3	4	11 $\frac{3}{4}$	296		
30	4	7	260	Cast iron arms.	
5	4	$\frac{1}{2}$	209		
7	4	$\frac{1}{2}$			
6	4		277		
31	3		130		
34	2	6	63	Cast iron arms.	
32	2	4	128		
33	2				
	7	6	1400	Wro't. iron arms.	
			68		

86 BAND WHEELS FOR LATHES.

No.	Diameter.		Face.	
	Ft.	In.	Inches.	
1	2	8	$2\frac{7}{8}$	6 straight arms.
2	2	$3\frac{3}{4}$	$3\frac{1}{4}$	6 crooked arms.
3	2	2	$2\frac{7}{8}$	4 branched arms.
4	2	2	$2\frac{3}{8}$	4 straight arms.
5	2	$1\frac{3}{4}$	$1\frac{3}{4}$	4 branched arms.
6	1	$11\frac{1}{2}$	$1\frac{1}{8}$	4 straight arms.
7	1	$10\frac{1}{2}$	$2\frac{3}{4}$	4 branched arms.
8	2	$\frac{1}{2}$		cone wheel.

No.	Diam.	Thickness.		No.	Diam.	Thickness.
	Inches.	Inches.			Inches.	Inches.
1	20	$2\frac{3}{4}$	Arms.	27	$7\frac{1}{2}$	$1\frac{1}{4}$
2	24	3		28	$7\frac{1}{2}$	1
3	15	2	Arms.	29	7	2
4	12	$2\frac{1}{4}$		30	7	$1\frac{3}{4}$
5	12	$1\frac{3}{4}$		31	7	$1\frac{1}{2}$
6	11	$2\frac{1}{2}$		32	7	$1\frac{1}{4}$
7	11	$2\frac{1}{4}$		33	7	1
8	$10\frac{1}{2}$	$2\frac{1}{8}$		34	$6\frac{3}{4}$	$1\frac{1}{2}$
9	$10\frac{1}{2}$	$1\frac{3}{4}$		35	$6\frac{1}{2}$	$1\frac{1}{2}$
10	10	2		36	$6\frac{1}{2}$	$1\frac{1}{4}$
11	10	$1\frac{1}{2}$		37	$6\frac{1}{2}$	1
12	10	1		38	$6\frac{1}{2}$	$2\frac{1}{8}$
13	9	2		39	$6\frac{1}{2}$	$1\frac{7}{8}$
14	9	$1\frac{3}{4}$		40	$6\frac{1}{4}$	$1\frac{3}{4}$
15	9	$1\frac{1}{2}$		41	$6\frac{1}{4}$	$1\frac{1}{2}$
16	9	$1\frac{1}{4}$		42	$6\frac{1}{4}$	$1\frac{1}{4}$
17	9	1		43	6	$2\frac{1}{8}$
18	$8\frac{3}{4}$	$1\frac{3}{4}$		44	6	$1\frac{3}{4}$
19	8	3		45	6	$1\frac{1}{2}$
20	8	2		46	6	$1\frac{1}{4}$
21	8	$1\frac{3}{4}$		47	6	1
22	8	$1\frac{1}{4}$		48	$5\frac{3}{4}$	$1\frac{1}{4}$
23	8	1		49		
24				50	$5\frac{1}{2}$	$1\frac{1}{2}$
25	$7\frac{1}{2}$	$2\frac{1}{4}$		51	$5\frac{1}{2}$	$1\frac{1}{4}$
26	$7\frac{1}{2}$	$1\frac{3}{4}$		52	$5\frac{1}{2}$	1

No.	Diam.	Thickness.		No.	Diam.	Thickness.
	Inches.	Inches.			Inches.	Inches.
53	5	1½		79	3½	7⁄8
54	5	1¼		80	3½	¾
55	5	1⅝		81	3¼	1
56	5	1		82	3¼	7⁄8
57	4¾	1½		83	3	1¼
58	4¾	1¼		84	3	1
59	4¾	1⅝		85	3	7⁄8
60	4½	2		86	2¾	1
61	4½	1¾		87	2¾	7⁄8
62	4½	1½		88	2½	7⁄8
63	4½	1¼				
64	4½	1⅝				
65	4½	1				
66	4¼	1½				
67	4¼	1¼				
68	4¼	1				
69	4	1½				
70	4	1¼				
71	4	1				
72	3¾	1¼				
73	3¾	1				
74	3¾	7⁄8				
75	3¾	¾				
76	3½	1½				
77	3½	1¼				
78	3½	1				



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